# CAUSES AND EFFECTS OF DELAY IN THE CONSTRUCTION PROJECT

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I/We* hereby declare that I/We* have checked this thesis/project* and in my/our* opinion, this thesis/project* is adequate in terms of scope and quality for the award of the Bachelor Degree of Civil Engineering

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## STUDENT'S DECLARATION

I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

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Thesis submitted in fulfillment of the requirements
for the award of the
Bachelor Degree in Civil Engineering

Faculty of Civil Engineering and Earth Resources

UNIVERSITI MALAYSIA PAHANG

JUNE 2018

## ACKNOWLEDGEMENTS

Praise to the Almighty Allah the God of the Universe who gave me strength to complete this thesis. This piece of work would not become possible without His bless.

I would like to express my heartfelt gratitude to my supervisor, En Zahrizan bin Zakaria for his kind assistance, wise counsel, professional comments and suggestions throughout this final year project.

Greatest thanks to all respondents in the survey conducted, who participated in this questionnaire survey and patient enough to spent their precious time in replying the questionnaires, and my colleagues in the faculty who assist me during the data distribution. Your kind and generous help will always be in my mind.

Deepest thanks to my family especially to my beloved mothers, Mrs. Salmah binti Ismail and to my siblings for their constant support and prayers throughout the process of producing this project report. I would like to take this opportunity to express my appreciation to my friends. My special thanks to Muhammad Al Amin, Nur Fatihah, Nur Rabiatul Adawiyah and Nor Ain for their valuable advice, support and assistance throughout the period of my project.

Finally, I would also like to acknowledge each and every person who has contributed their effect in this study by whether means directly or indirectly. Without the contribution of all those mentioned above, this work would not have been possible, thank you to all of you.

.

# ABSTRAK

Penyiapan projek pembinaan yang mengikut masa adalah kriteria penting dalam menentukan kejayaan sesebuah projek. Kegagalan untuk penyiapkan projek mengikut masa akan mengakibatkan kelewatan dalam projek pembinaan. Keperluan untuk mengawal punca-punca kelewatan semasa proses pembinaan timbul apabila jumpal projek-projek yang mengalami kelewatan telah meningkat dari semasa ke semasa. Oleh itu, ianya penting untuk mengenalpasti punca-punca masalah ini pada permulaan projek pembinaan.Objektif kajian ini adalah untuk mengenal pasti sebab-sebab penangguhan dalam industri Pembinaan, untuk mengenal pasti kesan pengangguhan dalam industri pembinaan dan akhir sekali, kajian ini akan menilai cara-cara terbaik untuk memperbaiki masalah pengangguhan dalam industri pembinaan. Kajian ini menganbil pendekatan dan percubaan untuk menganalsis kesan ppengangguhan. Kajian mengunakan boring kaji selidik telah dijalankan untuk mengenalpasti sebab-sebab dan kesan terhadap kelewatan dalam projek pembinaan daripada perspektif pelanggan, perunding dan syarikat pembinaan. Kajian ini telah mengenal pasti sebab-sebab utama berlakunya pengangguhan dalam projek pembinaan daripada tiga puluh empat sebab-sebab, tujuk kesan yang menyumbang kepada kelewatan dalam pembinaan dan cara-cara untuk mengurangkan kelwatan dalam projek pembinaan. Perspektif pelanggan, perunding, kontraktor, bahan, peralatan dan masalah luaran yang berkaitan telah dianalisis dan didasarkan berdasarkan *Relative Important Index* (RII). Berdasarkan keputusan RII, sepuluh kedudukan tertinggi sebab-sebab berlakunya kelewatan dalam projek telah dihasilkan. Masalah berkaitan pelanggan merupakan penyumbang utama kepada penyebab berlakunya kelewatan dalam projek pembinaan melalui penglibatan atau campur tangan dari pelanggan semasa projek pembinaan sedang berlangsung. Tujuh kesan pengangguhan projek ialah melebihi kos yang ditetapka, kelewatan masa, kekerangan kualiti kerja, disenarai hitam oleh pihak berkuasa, hilang minat oleh pemengang saham, gaji tidak dibayar oleh majikan, dan perlu menyusun semula jadual kerja. Projek melebihi kos dan masa yang ditetapkan merupakan kesan utama ke atas sesuatu projek apabila berlakunya kelewatan dalam projek pembinaan.

## ABSTRACT

A timely completion of the construction project is a major criterion of the project success. Failure to complete the project on time will ultimately result in delay. The need to control the causes of delays during the construction process comes out when the number of delay project has been increase from time to time. Hence, it is essential to identify the causes of this problem from the early stage of the construction project. The objectives of this study are to identify the causes of delay in the construction industry, to identify the effects of delay in the construction industry and finally to assess the best method to improve the problem of delay in the construction industry. This study takes an integrated approach and attempts to analyse the impact of delay. A questionnaire survey was conducted to identify the causes and effect of delay from client, consultant and Construction Company. This study identified the most important causes of delay from a list of thirty four causes, seven effect that contribute to construction project delay and recommendation the method to improve project delay. The perspective of client, consultant, contractor, material, equipment and external related problem has been analysed and ranked based on Relative Important Index (RII). Based on the RII result, the highest top ten ranking on causes of delay have been produced. Client related has the highest contribution to causes of project delay in project by client inference during the construction project. The seven effect of delay were cost overrun, time overrun, interior quality of works, blacklisted by relevant authorities, loss of interest by stakeholders, non-payment by employer and rescheduling of works. 'Cost overrun' and 'time overrun' has been the main effect to the project causes by project delay.

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| | |
|---|---|
| GDP | Gross domestic product |
| KPKT | Ministry of housing and local development |
| CIDB | Construction industrial development board |
| RII | Relative importance index |
| SCG | Special condition of contract |
| GCC | General conditions of contract |
| EOT | Extension of time |

# CHAPTER 1

# INTRODUCTION

## 1.1 Introduction

The construction sector has been playing a significant role in the aggregate economy of our country in term of its contribution to revenue generation, capital formation and employment creation which ultimately support the gross domestic product (GDP) and the socio-economic development of Malaysia. Considering the substantial role of the construction sector in the economic development of Malaysia, it is necessary for Malaysia government to give attention and focus on construction sector for qualifying the title of development nation(Khan et al., 2014). However, many projects in Malaysia has experienced extensive project delays and exceed the time frame of the project.

Delay in the construction project is a common problem in Malaysian construction industry. There are many unpredictable factors resulting from various sources affecting construction projects (Nyoni et al., 2017).

Although there is no consensus on the factors affecting construction delay, it is generally understood that construction delay is the most critical problem causing failure to deliver the project in time, within stimulated budget constraint, and expected quality (KPKT, 2010).

All parties involved in the construction industry focus on the time, cost and quality of a project. It is important to keep the project on track to prevent the project from the delay. This research is carried out to study the causes and effects of the delay in the construction project in Malaysia.

## 1.2 Background of Problem

Delays in construction projects are problems faces in the entire world (Bangash, 2016). Project delay in the construction project can be identified as time overrun which is overrun beyond the time frame of the project in the contract. In the same line of argument, Awari et al (2016), defined that delay as the time overrun and cost overrun either beyond completion date specified in a contract or beyond the date that the parties agree upon for delivery of a project. Mohamad (2010) agitates that delay is an act or event that tends the time to complete or perform an act under the contract. There are many unpredictable factors that resulting in the project to delay.

Factor that causes delays on construction projects is a universal problem and often occur. By identifying possible delays, there is a better chance to manage and control possible causes through the life cycle of a project (Afshari et al., 2011). The success of a project is determined by cost, time and quality once the project is completed (Lessing et al., 2017).

In the year 2008, the construction sector grew 2.1% from the total of Gross Domestic Product (GDP), emanated mainly from the civil engineering sub-sector (BNM, 2009). GDP by the state showed that the state economic structure was varied and unique.

Delay becomes a problem that associates in the construction project. The need to control the factors of delays during construction process comes out when the number of delays project has been increased from time to time. When a project delay can no longer be absorbed by the client, it will lead to the project being abandoned. According to numbers released by Ministry of Housing and Local Government, about 115 abandoned housing projects are recorded since 1990 until June 2008 (Ministry of Housing and Local Government, 2009).

Regarding project delay, Malaysia government has acknowledged the construction delays and cost overruns problems as a big headache, especially with government-related funded projects. Minister of Public Work Department, Datuk Shaziman Abu Mansor, cited about RM200 million has been providing for the

construction industry to revive most of the abandoned government projects under economic Stimulus Package (Utusan Malaysia, May 2009). This showed that the Government always takes a cognizance of the important role of the construction to stimulate domestic economic activities and in enhancing economic growth in view of this linkage to construction-related industries.

## 1.3 Problem Statement

The delays in construction projects have become one of the most common problems in the industry that can cause a multitude of negative effects on the projects and its stakeholders. When project delays are unexpected, they are hardly manageable and have rather negative impacts on the project activities and outcomes. An expected delay will extend the overall duration of project activities and entrails an increase in project cost. It produces time-associated cost effects that will increase the resource consumption and will require extra time upon reaching project success(Warudkar, 2016).

Delay in progress payment, slow decision making, poor communication between the consultant, inadequate information, conflicts between consultant parties and the mistake during construction are among the reason that can delay the construction project. This problem will lead to either extended or accelerate and therefore, incur an additional cost of the project.

In addition, the increasing of the oil price world, give the impact to the construction project. The cost of the construction also will increase because the price to buy material and to pay the labour salary will increase too. If the situation is left and nitrated, it will lead to the more serious problem in the future upcoming construction project in Malaysia. Furthermore, if this problem continuer, those were working in the construction industry will be facing numerous procedure and regulation before been awarded a construction project.

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